REMARKS

I. Status and Disposition of the Claims

Claims 1-3 are pending.

Applicants acknowledge, with appreciation, the Examiner's withdrawal of the prior applied claim objections and 35 U.S.C. § 112, second paragraph rejection. *See* Final Office Action, page 2

The Examiner continues to reject claims 1-3 under 35 U.S.C § 102(b) as "anticipated by," or, in the alternative, under 35 U.S.C. § 103(a) as "obvious over" Japanese Publication No. JP 2000-021402 ("Inoue"). *See id*. at 2-3 Applicants respectfully continue to disagree with and traverse this rejection for at least the reasons of record, as well as the following additional reasons.

II. Response to Rejections

A. § 102(b) rejection of claim

As mentioned, the Examiner maintains that claims 1-3 are anticipated by or unpatentable over Inoue for the reasons of record. *See id.* Applicants filed detailed arguments against the Examiner's position in the Amendment filed January 3, 2006. however, the Examiner found those arguments unpersuasive. *See id*. at 4. Specifically, the Examiner asserts that

> [g]iven that the active material for a positive electrode material disclosed by Inoue... and the instant application have the same material properties and particle size, it is the position of the examiner that other properties of said active material... such as the occupancy rate of lithium... would be necessarily present.

Id. 4-5.

Applicants respectfully disagree for at least the reasons of record, as well as the following additional reasons.

Applicants respectfully maintain that the Examiner has not provided sufficient evidence to establish that Inoue teaches, expressly or inherently, the claimed lithium composite oxide. Specifically, the Examiner has not provided sufficient evidence to establish a *prima facie* case that Inoue's compositions inherently possess the claimed lithium site occupancy rate and carbon content. *See* claims 1 and 2; Amendment filed January 3, 2007, pages 7-10. Indeed, the Examiner has not provided any reason *why* mere similarity in the compositions of Inoue and the claimed invention *necessarily* means that Inoue's compositions possess the claimed lithium site occupancy rate and carbon content. *See* claims 1 and 2; M.P.E.P. § 2112 (IV) (citing *In re Rijkaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) and stating that "[t]he fact that a certain result or characteristic **may** occur or be present in the prior art **is not** sufficient to establish the inherency of that result or characteristic.).

Moreover, the present specification clearly refutes the Examiner's position that compositional similarity between Inoue's composite oxide and the claimed lithium metal composite oxide is sufficient to establish that Inoue's composition inherently possesses the claimed lithium site occupancy and carbon content. *See* specification, page 29, table. As shown in the specification, samples A-D and K-M exhibited a lithium site occupancy rate of at least 98%, whereas samples E-J have a lithium site occupancy rate less than 98%. *See id*. Except for the claimed Lithium site occupancy rate, all of these samples are compositionally similar to one another. *Id*. This is clear evidence

that compositional similarity between two lithium composite oxides is insufficient to establish that each composite oxide has the same lithium site occupancy rate.

Applicants also respectfully direct the Examiner to the attached Declaration under 37 C.F.R. § 1.132. As shown, Applicants manufactured three lithium metal composite oxides (samples, A, B, and C), in accordance with the Inoue's disclosure. *See* Declaration, pages 2-5. The lithium content of each sample was determined by X-Ray diffraction and Reitveld analysis. *See id.* at 4. In addition, the carbon content of each sample was determined by high-frequency heating-infrared absorption. *See id.* at 4-5. As reported in the declaration, Samples A, B, and C exhibited a lithium site occupancy rate of 95.1%, 94.5%, and 93.1%, respectively. These samples also contained 0.2 wt %, 0.22 wt %, and 0.32 wt % of carbon, respectively. Thus, it is clear that compositions manufactured according to Inoue process do not necessarily possess the claimed lithium site occupancy rate and/or carbon content.

For at least the foregoing reasons, Applicants submit that Inoue's compositions clearly do not meet, expressly or inherently, each and every element of the present claims. The §102(b) rejection of claims 1-3 as anticipated by Inoue is therefore improper, and should be withdrawn.

B. § 103(a) rejection of claims 1-3

With respect to the § 103(a) rejection of claims 1-3 as unpatentable over Inoue, again, Applicants disagree with the Examiner's position for at least the reasons of record, as well as the following additional reasons.

Several basic factual inquires must be made in order to determine the obviousness or non-obviousness of claims of a patent application under 35 U.S.C.

§ 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1966), require the Examiner to:

(1) Determine the scope and content of the prior art;

(2) Ascertain the differences between the prior art and the claims in issue;

(3) Resolve the level of ordinary skill in the pertinent art; and

(4) Evaluate evidence of secondary considerations.

The obviousness or non-obviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 U.S.P.Q. at 467; *see also KSR Internat'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

In the recent *KSR* case, the Supreme Court recognized that a showing of "teaching, suggestion, or motivation" to modify or combine the teachings of cited references could provide helpful insight in determining whether the claimed subject matter is obvious under Section 103(a). *Id.* at 1741. In addition, the Supreme Court mandated that "[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit." *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir., 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")).

Following the *KSR* decision, the Office issued a memorandum to its technology center directors on May 3, 2007, indicating that "**in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would**

have combined the prior art elements in the manner claimed." (Emphasis in original).

Accordingly it is clear that to establish a prima facie case of obviousness, an examiner must, among other things, identify a reason why a person of ordinary skill in the art would modify a cited reference in a proposed manner.

In the present case, however, the Examiner's assertion of obviousness is not predicated on *any*, much less proper, identification of motivation (i.e., *why* one would have combined the references), as required by the May 3, 2007, Office memorandum, the M.P.E.P., and long-standing case law. Rather, the Examiner's entire position as to the obviousness of the claimed invention rests on an assertion that,

> it would have been within the skill of the ordinary artisan to mix the raw materials of the active material at high temperatures, as disclosed by Inoue., because temperature affects lattice parameters and crystalline structure of the positive electrode active material, which in turn affect the occupancy rate of lithium and the weight 5 of carbon present in the active material.

Final Office Action, page 3.

In response, Applicants respectfully submit that the Examiner's position is inconsistent with established U.S. patent law. The M.P.E.P explains in detail that (1) "the mere fact that reference can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art suggests the desirability of the combination" and (2) "the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient to establish *prima facie* obviousness. . . without some objective reason to combine the teachings of the reference." MPEP § 2143.01 (emphasis in original).

In the present case, the Examiner has merely asserted that one of ordinary skill in the art *could* modify Inoue's compositions, but has provided no objective reason as to *why* they would do so. While the Examiner has articulated that modifying Inoue will have "an" impact e.g., on lattice parameters, the Examiner has not established *why* such a modification would be considered desireable by one of ordinary skill in the art. Certainly, the mere fact that the modification has "an" impact cannot be considered to provide the requisite motivation. Indeed, all actions (i.e., modifications) impart some reaction (i.e. impact). However, not all reactions are desireable.

For at least the foregoing reasons, the Examiner has failed to establish that one of ordinary skill in the art would have been motivated to modify Inoue so as to arrive at the claimed invention. The § 103(a) rejection of claims 1-3 is therefore improper, and should be withdrawn.

III. Conclusion

In view of the foregoing remarks, Applicants respectfully submit that the pending claims of the present application are not obvious in view of the references applied by the Examiner. Thus, Applicants respectfully request the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: September 26, 2007

By: /David W. Hill/
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Attachment: Declaration of Katsuya Kase Under 37 C.F.R. § 1.132